## Serial No.: 09/382,186

36. The construct of claim 30, wherein said at least one other arm that specifically binds a targetable conjugate is a monoclonal antibody or a fragment of a monoclonal antibody.

The construct of claim 30, wherein said at least one arm that specifically binds targeted tissue is a humanized antibody or a fragment of a humanized antibody.

- 38. The construct of claim 30, wherein said at least one other arm that specifically binds a targetable conjugate is a humanized antibody or a fragment of a humanized antibody.
  - 39. The construct of claim 30, wherein said at least one other arm specifically inds peptide.
- 40. The construct of claim 30, wherein said at least one other arm specifically binds a carbohydrate.
- 41. The construct of claim 30, wherein said at least one other arm specifically binds a hapten.
- 42. The construct of claim 30, wherein said at least one other arm specifically binds a chelator or a metal-chelate complex.
- 43. The construct of claim 42, wherein said chelator is a hard base chelator for a hard acid cation.
- 44. The construct of claim 42, wherein said chelator is a soft base chelator for a soft acid cation.
- 45. The construct of claim 43, wherein said chelator is a hard base chelator that comprises carboxylate and amine groups.

Serial No.: 09/382,186

46. The construct of claim 43, wherein said hard base chelator is DTPA, NOTA, DOTA or TETA.

The construct of claim 30, wherein said at least one other arm specifically binds a tyrosyl-lysine dipeptide.

- 48. The construct of claim 30, wherein said at least one other arm specifically binds Tyr-Lys(DTPA)-NH<sub>2</sub>, or Lys(DTPA)-Tyr-Lys(DTPA)-NH<sub>2</sub>.
- 49. The set of expression cassettes of claim 31, wherein a first expression cassette is capable of producing in a host cell a fragment of a bi-specific fusion protein and comprises, in the 5' to 3' direction of transcription, a transcriptional initiation regulatory region functional in said host cell, a translational initiation regulatory region functional in said host cell, a DNA sequence encoding a scFv linked to a Fd fragment, and a transcriptional and translational termination regulatory region functional in said host cell, wherein said fragment of said bi-specific fusion protein is under the control of said regulatory regions.

The set of expression cassettes of claim 49, wherein a second expression prassette is capable of producing in a host cell a light-chain antibody fragment which is complementary to said Fd fragment in and comprises, in the 5' to 3' direction of transcription, a transcriptional initiation regulatory region functional in said host cell, a translational initiation regulatory region functional in said host cell, a DNA sequence encoding a light-chain antibody fragment, and a transcriptional and translational termination regulatory region functional in said host cell, wherein said light-chain antibody fragment is under the control of said regulatory regions, and wherein said light-chain antibody fragment, when associated with said Fd fragment, forms a Fab fragment whose binding site is specific for said targeted tissue.

Mil